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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/364,070	07/30/1999	AKIHIRO SUZUKI	3327.2062-01	8907

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EXAMINER	
POON, KING Y	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/364,070	SUZUKI ET AL.	
	Examiner	Art Unit	
	King Y. Poon	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 15-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-6* is/are allowed.

6)☒ Claim(s) *15-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 08/544,076.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 15-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bain et al. (US 5,287,434) in view of Lobiondo (US 5,287,194) and Evanitsky et al (US 5,045,880 incorporated by Lobiondo in referencing to programming print job criteria, column 4, lines 40-55, Lobiondo)

Regarding claim 15: Bain teaches a job scheduling device (PC 14, column 3, lines 50-55) which sequentially stores jobs, (job, fig. 4, J1, J2..., fig. 1) for which processing requests (the request of user of how to process print job, column 4, lines 35-46) were received, in a queue (column 8, lines 35-40) and sequentially processes the jobs (search for the highest priority job to be printed, column 10, lines 40-46, i.e., process the job in the sequence from highest priority to lowest priority) held in the queue using a job execution section, (the routine of processor that distribute a print job to a printer, column 11, lines 58-63), the job scheduling device comprising: a plurality of queues (Q1-Qn, fig. 1) provided corresponding to a status (the job to be printed by a certain type of printer, column 8, lines 25-35) of a sequential job process (queue, inherently processes jobs sequentially/in order); and scheduling means (the routine of

the processor 19 that schedules print job, using queues, according to the type of printer and priority, column 8, lines 25-35) for scheduling the jobs using the plurality of queues; and recovery means (the routine of the processor that restarts job such that each job continues on the same printer, column 15, lines 20-25, column 17, lines 25-35) for recovering the status (state, column 15, lines 20-25) of each of the jobs (column 15, lines 20-25) being held in the plurality of queues, at the time of recovery from a failure, (recover from the failure to spool due to termination, column 15, lines 12-25) if any failure occurred while the jobs are being scheduled by the scheduling means, (the processor is processing (scheduling) jobs on printers, column 14, lines 62-68, column 15, lines 1-12, when termination of spooler occurs) wherein the status recovered by the recovery means is the status immediately before (column 15,lines 40-45) the occurrence of failure, and wherein if the status of a job is changed due to the failure (column 16, lines 55-59), the status recovered is a changed status (wait state status, column 16, lines 55-59) and job information associated with the job having the changed status is rewritten to reflect the changed status (designating the wait state, column 16, lines 55-60).

Bain does not teach receiving processing request from terminals.

Lobiondo, in the same area of using a job scheduler device (column 3, lines 40-45) for scheduling print jobs, to be printed by printers, (column 4, lines 45-50), using printer queue (430, fig. 4), teaches the job scheduler device (scheduler 50, column 3, line 41) would receive and schedule print job processing request (criteria of print job, column 3, lines 35-50) from different terminals. (Workstation 30, column 3, lines 25-35)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device to receive print job processing request from different terminals.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device by the teaching of Lobiondo because of the following reasons: (a) it would have allowed a user at any local area within the network of the scheduling device and the different terminals to control printing of a job, as taught by Lobiondo, at column 2, lines 32-35; and (b) it would have allowed the job scheduling device to schedule print jobs for different users at different locations (terminals) and increased the usage of the system.

Note: Bain teaches that the processor is controlled by software routine, column 3, lines 5-35, and lines 55-56. It is inherent that different functions carried out by a processor are controlled by different software codes or routines when a processor is run by software.

Regarding claims 16, 18: Bain et al teaches a job scheduling device (PC 14, column 3, lines 50-55) for storing, in a queue, (fig. 4, column 8, lines 35-40) print jobs (job, fig. 2, J1, J2, ..., fig. 1) which include print data and attribute information (column 8, lines 35-40, column 6, lines 55-69) and for which processing requests (the request of user of how to process print job, column 4, lines 34-46) were received and for sequentially printing the print jobs held in the queue (search for the highest priority job to be printed, column 10, lines 40-46, i.e., print job in the sequence from highest priority to lowest priority) based on the attribute information (job's priority, column 10, lines 40-

45) using a job execution section, (the routine of processor that distribute a print job to a printer, column 11, lines 58-63) the job scheduling device comprising: a plurality of queues (Q1-Qn, fig. 1) provided corresponding to states of the jobs; (the job to be printed by a certain type of printer, column 8, lines 25-35), and scheduling means (the routine of the processor 19 that schedule print job according to the type of printer and priority, column 8, lines 25-35) for scheduling the jobs using the plurality of queues; and attribute modifying means (routine block 78, column 8, lines 1-8) for modifying the attribute information (priority, column 8, line 2) only when a print job can be changed at the time that an instruction (change request message, column 8, lines 1-8) for modifying the attribute information (priority, column 8, line 2) of the print job is received, and when the attribute information is determined to be free from errors (attribute information is 1's and 0's to the microprocessor; attribute information is free from error is being interpreted as the microprocessor would recognize/determined from the attribute information (1's and 0's) as a attribute information. Errors in the attribute information means the microprocessor would not recognize the 1's and 0's in the attribute information. The microprocessor changes the attribute in response to a change attribute, column 8, lines 1-10. Therefore, the microprocessor would change attribute only when the attribute information is free from error; i.e. The microprocessor would recognized the attribute information).

Bain does not teach receiving processing request from terminals.

Lobiondo, in the same area of using a job scheduler device (column 3, lines 40-45) for scheduling print jobs, to be printed by printers, (column 4, lines 45-50), using

printer queue (430, fig. 4), teaches the job scheduler device (scheduler 50, column 3, line 41) would receive and schedule print job processing request (criteria of print job, column 3, lines 35-50) from different terminals. (Workstation 30, column 3, lines 25-35)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device to receive print job processing request from different terminals.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device by the teaching of Lobiondo because of the following reasons: (a) it would have allowed a user at any local area within the network of the scheduling device and the different terminals to control printing of a job, as taught by Lobiondo, at column 2, lines 32-35; and (b) it would have allowed the job scheduling device to schedule print jobs for different users at different locations (terminals) and increased the usage of the system.

Note: Bain teaches the processor is controlled by software routine, column 3, lines 5-35, and lines 55-56. It is inherent that different functions carried out by a processor are controlled by different software codes or routines when a processor is run by software.

Bain does not teach wherein the attribute information is chosen from at least one of paper size, tray number and the availability of double side printing.

Lobiondo teaches conventionally, print job attribute includes at least one of paper size, tray number and the availability of double side printing (column 3, lines 55-60,

column 4, lines 42-46, Lobiondo; fig. 13, fig. 15, fig. 20, Evanitsky) and to modify print job attribute such that a print job can be completed.

Since Bain teaches programming a print job to be store in a spool and to select a printer to print the print job based on the programmed print job attribute and teaches to modified print job attributes; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain to include: print job attribute includes at least one of paper size, tray number and the availability of double side printing and to modify print job attribute.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain by the teaching of Lobiondo because: it would have allowed user that don' t known how to program the print job of Bain to have an ideal of what a print attribute is in order to made use of Bain's invention; it would have allowed the print job of Bain to be completed when the printer is not capable of printing the print job; and it would have completed Bain's invention – Bain's invention omits explaining the print attributes of his print job in detail; which is well known in the art.

Regarding claim 17: Bain teaches wherein the attribute modifying means modifies the attribute information of the print job when the attribute information of the print job can be modified (inherent properties of modifying; it is impossible/can to modify something when the something is impossible to be modified. I.e., the something can be modified only when the something can be modified; also see claim 16).

Regarding claim 19: Bain teaches wherein the attribute modifying means determines whether the attribute information of the print job can be modified based on the queue in which the print job is stored (column 8, lines 1-10, based on whether the queue is in the process of distributing the print job to a printer).

Regarding claim 20: Bain teaches wherein the attribute modifying means determines that the instruction has an error (78, fig. 2, column 8, lines 1-10, the attribute modifying means must determines if the instruction can be processed; the examiner interprets that the event that the instruction can not be processed, e.g., the job cannot be processed by a printer, is an error) when the instruction includes an attribute that is not supported by the job scheduling device (the change of priority of a print job is not being supported during the time the print job is being distributed to a printer, column 8, lines 1-10; also see claim 16).

Regarding claim 21: Bain et al teaches a job scheduling device (PC 14, column 3, lines 50-55) comprising: a queue, (fig. 4, column 8, lines 35-40) that stores print jobs (job, fig. 2, J1, J2, ..., fig. 1) which include print data and attribute information (column 8, lines 35-40, column 6, lines 55-69) relating to a print job output result (e.g., the print job is being printed ahead of other jobs would resulted in a faster outputted print job); scheduling means (the routine of the processor 19 that schedule print job according to the type of printer and priority, column 8, lines 25-35) for scheduling the print jobs stored in the queues; and attribute modifying means (routine block 78, column 8, lines 1-8) for modifying the attribute information (priority, column 8, line 2) of the print job stored in the queue when an instruction (change request message, column 8, lines 1-8) for modifying

the attribute information (priority, column 8, line 2) of the print job is received and wherein the attribute modifying means modifies the attribute information only when the attribute information is determined to be free from error (attribute information is 1's and 0's to the microprocessor; attribute information is free from error is being interpreted as the microprocessor would recognize/determined from the attribute information (1's and 0's) as a attribute information. Errors in the attribute information means the microprocessor would not recognize the 1's and 0's in the attribute information. The microprocessor changes the attribute in response to a change attribute, column 8, lines 1-10. Therefore, the microprocessor would change attribute only when the attribute information is free from error; i.e. The microprocessor would recognized the attribute information).

Bain does not teach wherein the attribute information is chosen from at least one of paper size, tray number and the availability of double side printing.

Lobiondo teaches conventionally, print job attribute includes at least one of paper size, tray number and the availability of double side printing (column 3, lines 55-60, column 4, lines 42-46, Lobiondo; fig. 13, fig. 15, fig. 20, Evanitsky) and to modify print job attribute such that a print job can be completed.

Since Bain teaches programming a print job to be store in a spool and to select a printer to print the print job based on the programmed print job attribute and teaches to modified print job attributes; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain to include: print job

attribute includes at least one of paper size, tray number and the availability of double side printing and to modify print job attribute.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain by the teaching of Lobiondo because: it would have allowed user that don' t known how to program the print job of Bain to have an ideal of what a print attribute is in order to made use of Bain's invention; it would have allowed the print job of Bain to be completed when the printer is not capable of printing the print job; and it would have completed Bain's invention – Bain's invention omits explaining the print attributes of his print job in detail; which is well known in the art.

Regarding claim 22: Bain teaches wherein the attribute modifying means modifies the attribute information of the print job when the attribute information of the print job can be modified (inherent properties of modifying; it is impossible/can to modify something when the something is impossible to be modified. I.e., the something can be modified only when the something can be modified; also see claim 16).

Regarding claim 23: Bain teaches wherein the attribute modifying means modifies the attribute information of the print job when the instruction is free from errors (instruction is free from error is being interpreted as the microprocessor would recognize the change request message as a change request message. Errors in the change request message means the microprocessor would not recognize the change request message. The microprocessor change the attribute in response to a change request

message/instruction, column 8, lines 1-10. Therefore, the microprocessor would change attribute only when the instruction is free from error).

Regarding claim 24: Bain teaches wherein the attribute modifying means determines whether the attribute information of the print job can be modified based on the status of the print job (column 8, lines 1-10, based on whether the print job is being distributed to a printer).

Regarding claim 25: Bain teaches wherein the attribute modifying means determines that the instruction has an error (78, fig. 2, column 8, lines 1-10, the attribute modifying means must determines if the instruction can be processed; the examiner interprets that the event that the instruction can not be processed, e.g., the job cannot be processed by a printer, is an error) when the instruction includes an attribute that is not supported by the job scheduling device (the change of priority of a print job is not being supported during the time the print job is being distributed to a printer, column 8, lines 1-10; also see claim 16).

Allowable Subject Matter

3. Claims 1-6 are allowed.

Response to Arguments

4. Applicant's arguments filed 10/21/2005 have been fully considered but they are not persuasive.

With respect to applicant's argument, that non of the references teaches "job information associated with the job having the changed status is rewritten to reflect the changed status" has been considered.

In reply: column 15, lines 35-45, Bain, clearly teaches that if the job is in a wait state before the failure, the job will be re-queued (in a wait state) and if a job is in a printing state before failure, the job will be immediately put back into the printing state.

Column 16, lines 54-60 further teaches if the print job is in a printing state when the job is terminated unsuccessfully (due to failure) the printing state is changed to wait state (changed state) the changed status is rewritten (wait state is designated).

With respect to applicant's argument that Bain does not teach "the attribute information is chosen from at least one of paper size, tray number and the availability of double side printing " has been considered.

In reply: Bain does not teach wherein the attribute information is chosen from at least one of paper size, tray number and the availability of double side printing.

Lobiondo teaches conventionally, print job attribute includes at least one of paper size, tray number and the availability of double side printing (column 3, lines 55-60, column 4, lines 42-46, Lobiondo; fig. 13, fig. 15, fig. 20, Evanitsky) and to modify print job attribute such that a print job can be completed.

Since Bain teaches programming a print job to be store in a spool and to select a printer to print the print job based on the programmed print job attribute and teaches to modified print job attributes; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain to include: print job

attribute includes at least one of paper size, tray number and the availability of double side printing and to modify print job attribute.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain by the teaching of Lobiondo because: it would have allowed user that don' t known how to program the print job of Bain to have an ideal of what a print attribute is in order to made use of Bain's invention; it would have allowed the print job of Bain to be completed when the printer is not capable of printing the print job; and it would have completed Bain's invention – Bain's invention omits explaining the print attributes of his print job in detail; which is well known in the art.

With respect to applicant's argument that the references does not teach "to modified the attribute information only when a print job can be changed at the time that an instruction for modifying the attribute information of the print job is received, and when the attribute information is determined to be free from errors, has been considered.

In reply: Baines teaches attribute modifying means (routine block 78, column 8, lines 1-8) for modifying the attribute information (priority, column 8, line 2) only when a print job can be changed at the time that an instruction (change request message, column 8, lines 1-8) for modifying the attribute information (priority, column 8, line 2) of the print job is received, and when the attribute information is determined to be free from errors (attribute information is 1's and 0's to the microprocessor; attribute information is free from error is being interpreted as the microprocessor would

recognize/determined from the attribute information (1's and 0's) as a attribute information. Errors in the attribute information means the microprocessor would not recognize the 1's and 0's in the attribute information. The microprocessor changes the attribute in response to a change attribute, column 8, lines 1-10. Therefore, the microprocessor would change attribute only when the attribute information is free from error; i.e. The microprocessor would recognized the attribute information).

5. **THIS ACTION IS MADE** FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 17, 2006

KING Y. POON
PRIMARY EXAMINER